User Manual(Ver 1.0)

# *ExiPrep*™16 Dx

**Fully Automated Nucleic Acid Extraction System**

BIONEER

*Innovation • Value • Discovery*

# Contents


**I. Getting Started** ..... 1

**II. Safety Warnings and Precautions** ..... 2

1. User and experimental precautions ..... 2
2. Precautions regarding the operation environment ..... 2
3. Precautions and warnings regarding instrument installation ..... 3
4. Precautions and warnings regarding instrument operation ..... 3
5. Precautions and warnings regarding product usage and maintenance ..... 4
6. UV Lamp ..... 5

**III. System Components and Specifications** ..... 6

1. System Components ..... 6
2. Specifications ..... 7
3. System Views ..... 7

**IV. Installing the *ExiPrep*™16 Dx** ..... 8

**V. DNA/ RNA Extraction** ..... 11

1. Contamination Protection Accessory Installation ..... 11
2. Sample Preparation ..... 12
3. RUN (Not used PC) ..... 14

**VI. *ExiStation*™ Manager Software** ..... 18

**VII. *ExiPrep*™16 Dx Setup** ..... 24

1. Main Menu ..... 24
2. Registering a New User ..... 28
3. Viewing Run History ..... 29
4. Managing the Login Mode ..... 30
5. Managing the Automatic UV-Sterilization Mode ..... 31
6. Configuring the System ..... 32
7. Administrator Management ..... 33

**VIII. Updating the *ExiPrep*™ 16 Dx** ..... 35

**IX. DNA/ RNA Extraction Program Number List** ..... 38

**X. Troubleshooting** ..... 42

**XI. Warranty** ..... 46


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# I. Getting Started

**Thank you for purchasing this Bioneer product.**

We will try our best to provide satisfactory results to our customers.

This manual contains practical guidelines and cautions to be taken regarding the instrument.

Please read this manual carefully and thoroughly before using the instrument.

**Website**

- Please visit us online at http://www.bioneer.com to obtain more information about *ExiPrep*™16 Dx.

**General information**

- *ExiPrep*™16 Dx is a trademark of Bioneer Corporation.
- The information contained in this manual is under copyright protection. It is unlawful to reproduce part or all of the contents of this manual without the expressed written consent of Bioneer Corporation.
- Bioneer Corporation reserves the right to alter, modify and otherwise make changes to the instrument and manuals without prior notice.
- You must be used carefully UV Lamp. Detail can be found in Safety warning and Precautions.

**Reversion**

Cat. Number A-5050 Rev. 1.0

March/2011

# II. Safety Warnings and Precautions

The warnings and precautions stated below are for the correct and safe operation of the instrument. Please heed all information for your safety. Bioneer Corporation does not assume responsibility for non-compliance with the safety warnings and precautions stated below.

## 1. User and experimental precautions

1) Make sure that the power supply (100-240V, ~50/60Hz) is correctly connected to the power adapter and that the power adapter is correctly connected to the instrument. Incorrect connection of the power adapter and power supply can result in instrument damage or failure to turn on.
2) This instrument is intended for nucleic acid extraction. Please use as such.
3) The instrument may stop if the LCD panel is touched while connected to a PC via LAN cable. If operating the instrument via PC software, please allow for the instrument to finish its programmed movement before operating the LCD panel.
4) Do not turn the PC off or disconnect the LAN cable connecting the PC to the instrument. Data communication error can result in instrument malfunction and can affect the results of your experiment.
5) Please install the instrument on a flat surface.
6) Do not operate the instrument with wet hands as this may result in shock or instrument malfunction. Please touch the power adapter cord with dry hands.
7) If the instrument is stopped either from operator error including improper accessory insertion or manually halting the instrument during normal operation, you must re-initialize the instrument before pulling out the Base Plate. Pulling out the Base Plate without prior initialization can lead to instrument damage from movement interferences including a raised Heating Block or other accessories stopped in motion. If Buffer Cartridges are inserted into the Base Plate, please reinitialize the instrument or pull out the Buffer Cartridges to make sure the Heating Block is not in the way of normal Base Plate movement.
8) Avoid placing objects in the front and rear of the instrument, as fan blockage may cause lowered efficiency of the Cooling Block.
9) Be careful not to have any obstructions or foreign materials introduced into the front-lower side Cooling Fan mesh. Foreign objects can hinder normal Cooling Fan operation and may lead to overheating of parts or cause a fire.

## 2. Precautions regarding the operation environment

1) If the power plug is loose, do not use the instrument. Plug overheating may result in shock or fire.
2) Do not operate multiple instruments out of a single wall outlet. The load may cause overheating and may lead to fire.
3) When plugging or unplugging the power adapter cord from a wall outlet, make sure your hands are

completely dry. Wet or moist hands may cause electric shock.

4) Avoid placing objects in the front and rear of the instrument.
5) Avoid installing the instrument in a dusty environment. Excessive dust may cause malfunction or damage to the instrument.
6) Avoid installation near heat sources. This can cause fire.
7) Avoid installation near sources of water or damp locations. This can cause electrical shock, fire or instrument malfunction.
8) Do not install near sources of flammable or corrosive gas. If there is a gas leak, do not touch the power plug but open a window to circulate fresh air. Sparks from the power plug can cause fire and explosions.
9) Do not disassemble or modify the instrument in any way. This can result in fire, electrical shock or malfunction, and also voids your warranty.

## 3. Precautions and warnings regarding instrument installation

1) This is a precision instrument. Do not install in a location exposed to direct sunlight.
2) Install the instrument on a flat, solid surface that is flat and does not move.
3) When installing the instrument, make sure at least 15 cm separate the instrument from the nearest wall.
4) Take caution not to damage the cooling fan mesh (located on the front-bottom) while installing.
5) When connecting the PC, network hub and *ExiPrep*™16 Dx, do so with all involved components powered off. Connecting components while the power is on may cause damage to the instrument.
6) Verify the network cable integrity when connecting between the PC, network hub and *ExiPrep*™16 Dx. Unstable network connections may result in invalid experimental data from data communication errors.

## 4. Precautions and warnings regarding instrument operation

1) Dust off the power plug and insert the plug so that the connection is firm and does not wiggle. Incomplete electrical contacts may cause fire.
2) Operate the instrument in an ambient temperature range of 15℃~30℃. Excessive exposure to heat may affect the instrument and yield inexact results.
3) Operate the instrument within the recommended humidity range (20~80%, no condensation). Humid conditions may cause corrosion or malfunction.
4) Do not place any objects next to or behind the instrument. The instrument may malfunction.
5) This instrument contains precision machined parts. Do not drop or severely agitate the instrument. This can break the instrument and compromise the safety of the product.
6) When not using the instrument for a long period of time, turn the instrument off and unplug from the wall outlet. Overheating and fire may occur.
7) Take caution not to damage the cooling fan mesh located on the front-bottom of the instrument. If

the mesh is damaged and the Cooling Fan does not work, the Cooling Fan motor and cooling element may overheat and cause fire.

8) Set your PC's Power Options for 'Turn off the display', 'Turn off the hard disk', 'Standby mode' and 'Sleep mode' to 'Never'. Because the instrument continuously transmits and receives data from the PC, hard disk power-down may cause malfunctions.
9) The instrument automatically turns off the UV lamp and its operation when the instrument's door is open. However, just in case it does NOT turns off when the door is open, please make sure the UV light does not directly expose to your eyes and skin.

## 5. Precautions and warnings regarding product usage and maintenance

1) This product must only be used for nucleic acid extraction and automatic aliquot. Do not use the instrument for any use other than explicitly stated in the User Manual.
2) Do not modify or delete instrument-related information installed within the instrument.
3) Operate the LCD touchscreen using a non-sharp object. Nails and other sharp objects may damage the product.
4) The instrument UV lamp will only operate if the door is completely shut. Make sure the door sensor is free of foreign materials or obstructions.
5) Do not use powerful detergents or solvents to clean the outside of the instrument as this may cause discoloration. If such chemicals are spilled on the instrument, immediately clean with a soft cloth.
6) Do not keep the instrument in an environment with high humidity. Damage from storage in these conditions is classified as water damage and is not covered by warranty. Also, damage arising from this type of exposure may be irreparable.
7) Disassembly and/or modification of the instrument voids the warranty and may be refused service.
8) Do not unplug the power adapter from the instrument while the instrument is in use. This may cause the instrument to break.
9) If a burning smell is detected or the instrument seems to be excessively hot during operation, immediately stop using the instrument and call your service representative.
10) Do not drop or impact the instrument. This is a direct cause of instrument damage and may void the warranty.
11) Always verify that the Heating Block is in normal position before pulling out the Base Plate. If the Base Plate is pulled out while the Heating Block is not in its normal, initialized position, the interference in movement can cause Heating Block and other internal component damage and lead to instrument malfunction. Since installed Buffer Cartridges obscure the view, re-initialize the instrument or take out the Buffer Cartridges and visually inspect the position of the Heating Block before pulling out the Base Plate.
12) Take caution not to damage the cooling fan mesh located on the front-bottom of the instrument. If the mesh is damaged and the Cooling Fan does not work, the Cooling Fan motor and cooling element may overheat and cause fire.

13) The instrument automatically turns off the UV lamp and its operation when the instrument's door is open. However, just in case it does NOT turns off when the door is open, please make sure the UV light does not directly expose to your eyes and skin.
14) When there is liquid in the Waste Tray in the equipment, take extra caution to push-in or pull-out the base plate so the liquid does NOT overflow to the instrument inside. If the liquid overflows inside the instrument, it may damage the instrument or cause the electrocution.

## 6. UV Lamp

1) UV lamp operation may create Ozone molecules. For the safety issue, the instrument is pre-programmed the UV lamp operation for 5 minutes only. Please do NOT extensively use UV lamp operations.
2) The Ultraviolet (UV) ray can seriously damage your eyes and skin when exposed directly (even through indirectly). When you deal with UV lamp, make sure you are wearing proper protective equipment.

# III. System Components and Specifications

## 1. System Components

*ExiPrep*™16 Dx

*ExiPrep*™16 Dx User's Manual

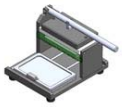
*ExiPrep*™16 Dx Accessory

Disposable Tip Rack

Elution Tube Rack

Sample Tube Rack

Tip Protector



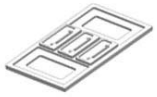
Multi Punch (Option)

6 Hole Punch

Waste Tray

Contamination Shield

Protection Cab
(Elution Tube Rack Type)



PCR Preparation Plate
for ExiStation (Option)

Adapter

Setup Tray

Protection Cab
Separation Tool(Option)

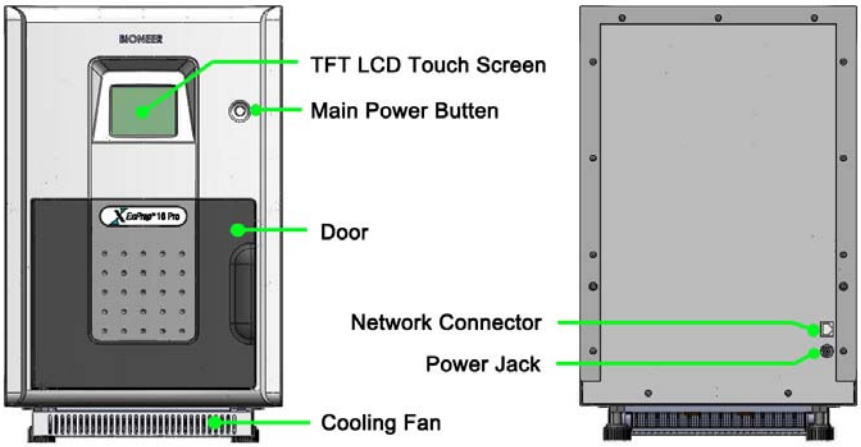
| Part Name | Cat. No. | Qty. | Check |
|---|---|---|---|
| *ExiPrep*™16 Dx | A-5050 | 1 ea | □ |
| User's Manual | | 1 ea | □ |
| Waste Tray | | 1 ea | □ |
| Sample Tube Rack | | 1 ea | □ |
| Elution Tube Rack | | 1 ea | □ |
| Disposable Tip Rack | | 1 ea | □ |
| Tip Protector | | 1 ea | □ |
| Protection Cab | | 1 ea | □ |
| Contamination Shield | | 1 ea | □ |
| 6 Hole Puncher | | 1 ea | □ |
| Setup Tray | | 1 ea | □ |
| Adapter | | 1 set | □ |
| (Optional) Multi Puncher | | - | |
| (Optional) Protection Cab Separation Tool | | - | |
| (Optional) PCR Preparation Plate for *ExiStation*™ | | - | |

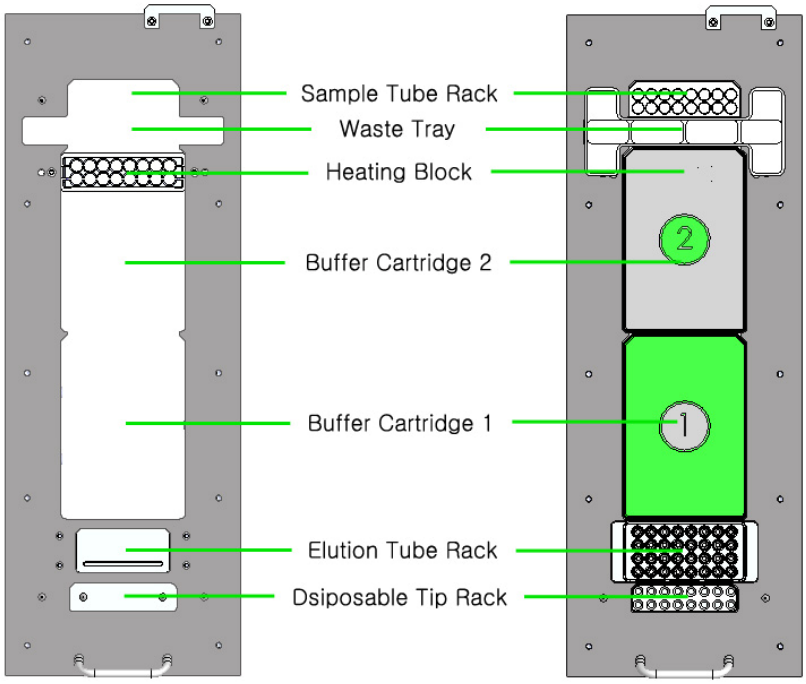
- PCR preparation plate: It is used for *ExiStation*™ system instead of Setup tray.

## 2. Specifications

| | |
|---|---|
| Dimensions (mm) | 320 (W) x 500 (H) x 535 (D) |
| Weight | 27 kg |
| Operating temperature | 15 – 30°C |
| Operating humidity | 20 - 80%, no condensation |
| Operating system | Standalone or PC |
| Electrical (Voltage / Frequency) | 100- 240 VAC, 50/60 Hz |
| Network support | TCP/IP protocol |
| User interface | 320 x 240 touch screen TFT LCD, 18 bit color |

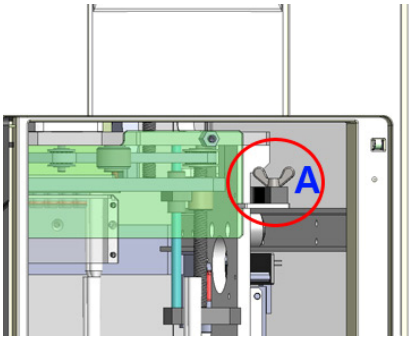
## 3. System Views



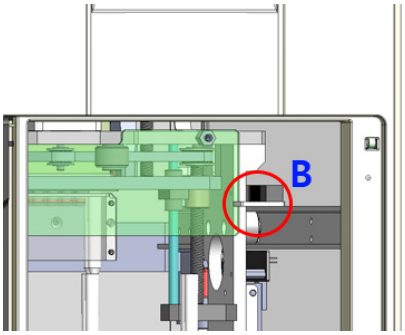



## IV. Installing the *ExiPrep*™16 Dx

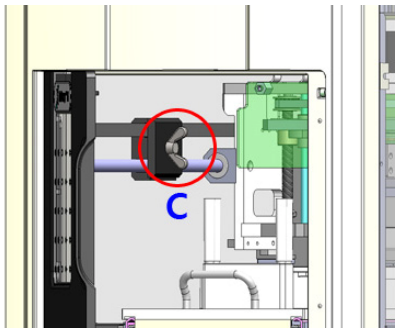
- Clear and clean the area where the instrument will be installed.
- Open the instrument door and remove the holding accessories.
- Make sure that all components are included. Refer to the list of components on page 6.



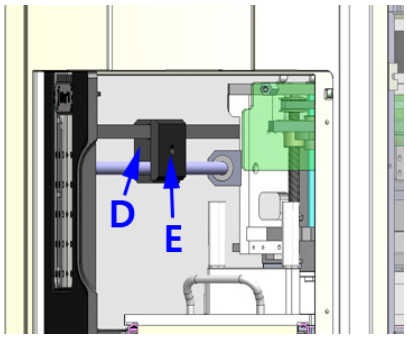

1. Open the door and remove the **Screw (A)** from the rail.




2. Remove the **Holding plate (B)** from the rail and the Syringe Block.

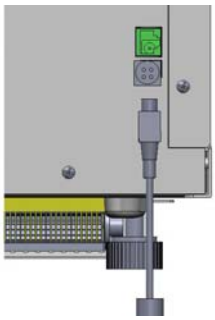



3. Remove the **Screw (C)** from the locking block which immobilizes the belt.



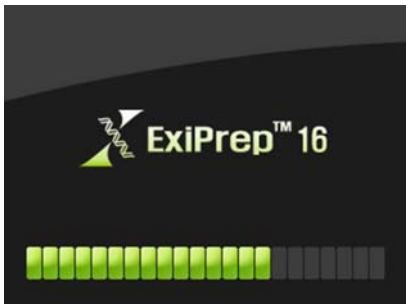

4. Separate the **holding block (D, E)** from the belt and remove it.

## IV. Installing the *ExiPrep*™16 Dx (continued)

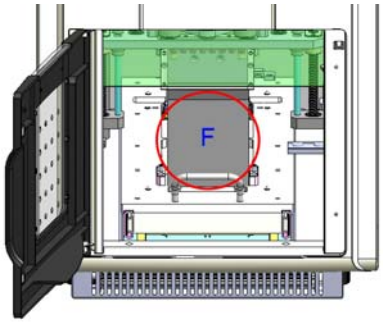


5. Connect the power cable to the rear of the instrument.

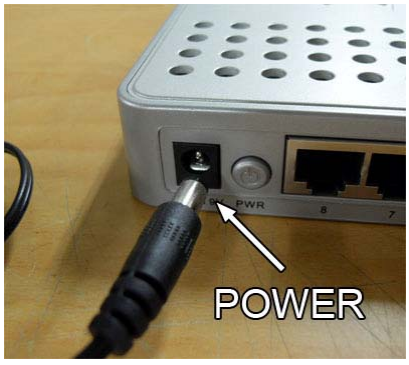
6. Turn on the instrument. A power button will display on the LCD touch screen to indicate normal power on.




7. Press the power button on the LCD screen to initialize the instrument. A progress bar on the lower portion of the LCD touchscreen will indicate initialization progress.




8. Open the door and remove the **Sponge block (F)** from the Base Plate after initialization.



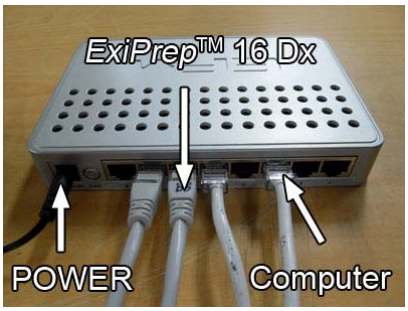

※ **PC connect mode**

9. Connect the network hub power adapter to the network hub and plug the adapter into a wall outlet.

## IV. Installing the *ExiPrep*™16 Dx (continued)

10. Connect the instrument to the network hub using a LAN cable.

11. Connect a LAN cable between the network hub and the PC which has the *ExiStation*™ Manager Software installed.




12. Installation of the instrument is complete.

# V. DNA/ RNA Extraction

## 1. Contamination Protection Accessory Installation

1. **From the 'Menu' screen,** click **'MISC SET'**.

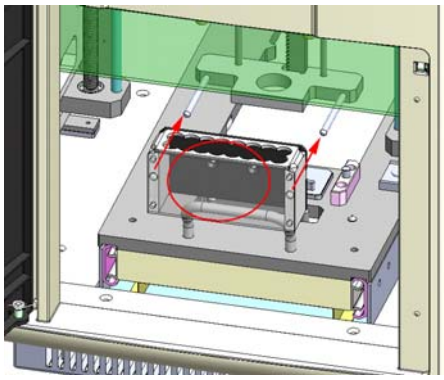
➢ Pull out the Syringe block all the way front (outside) Contamination Shield and Tip Protector.

**NOTE**

"Load" button of ExiStation™ S/W perform the same function with "MISC SET" button.

**CAUTION**

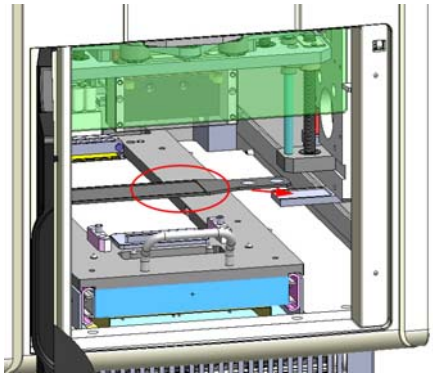
In order to use protection accessory, this must be installed on the Base plate accessory.



2. Place the Tip Protector on top of the Syringe block, and insert it into two holding shafts.

➢ Make sure front and rear are properly inserted.

➢ Do NOT FORCE to insert the Tip Protector. It may damage.



3. Place the Contamination Shield on the lower-right side of the Syringe block.

➢ Contamination Shield has a magnet which means if you place on the upside-down right, it will stick to the holding bar.

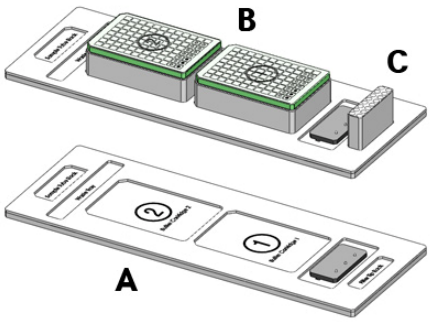
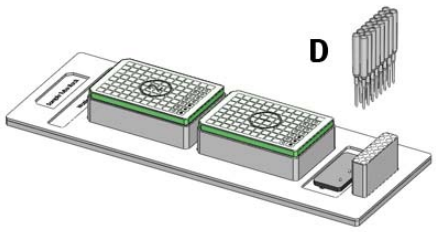
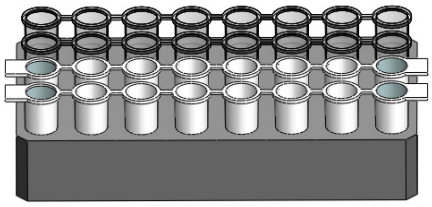
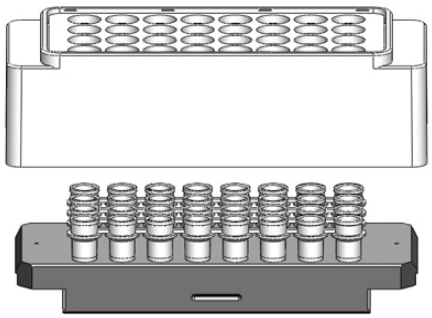
4. From the '**Menu'** screen, click **'MISC SET'**.

➢ The base plate moves back to the initialization position (inside the instrument).

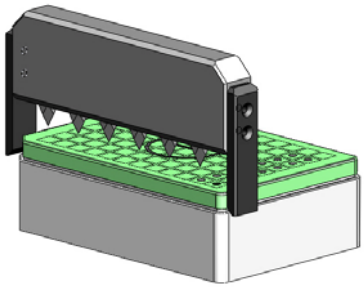
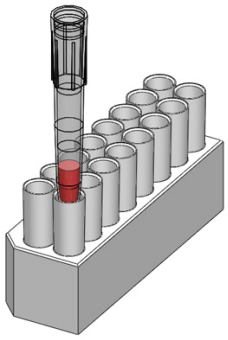
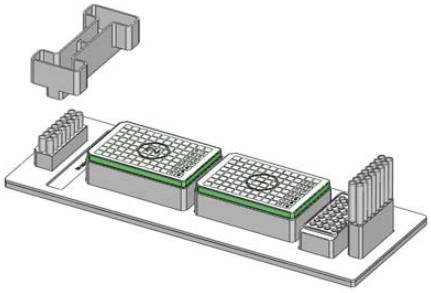
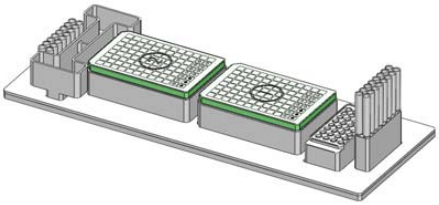
**NOTE**

"Load" button of ExiStation S/W perform the same function with "**MISC SET**" button.

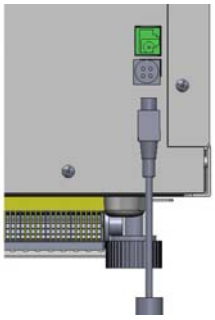
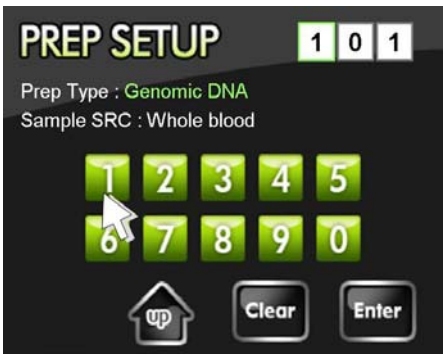
## 2. Sample Preparation

| | |
|---|---|
|  | 1. Place **'Setup tray (A)'** on a **flat** surfaced desk.<br>2. On the Setup tray, put on the '**Buffer Cartridge ① ② (B)', 'Disposable tip rack (C)'.**<br>➢ 'Setup Tray' and 'Tip Rack' are supplied with *ExiPrep*™16 Dx.<br>➢ 'Buffer Cartridge', 'Disposable Tip' and 'Elution Tube' are supplied in the DNA/ RNA Extraction Kit. |
|  | 3. Place the **Disposable tip(D)** for the elution on to the Disposable tip rack. |
|  | 4. Check DNA/ RNA extraction Kit for the samples and the nucleic types to be extracted.<br>5. Place the number of **sample tube** (from the diagnostic kit) and the **diagnosis kit tube** to be extracted on the **Elution tube rack**.<br>➢ You may cut the strips if necessary to match the number tubes to samples.<br>➢ Make sure front and rear sides of the Elution tube rack before placing tubes. |
|  | 6. Check the position of the diagnosis kit tubes in the rack. Place the Protection Cap (F) on to the rack until it clicks into place.<br>➢ DO NOT press too hard on the **Protection Cap**. |

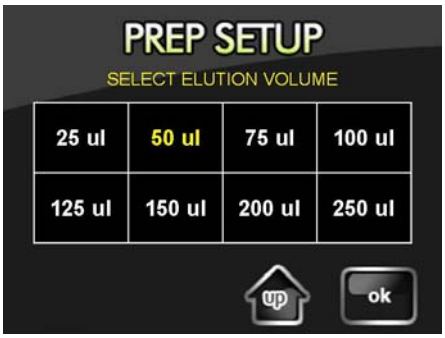
## 2. Sample Preparation (Continued)

| | |
|---|---|
|  | 7. Punch holes in the sealing film of Buffer Cartridge ① corresponding to the relative location and number of tubes and tips, using the punch tool.<br>8. Punch holes in sealing the film of Buffer Cartridge ② using the punch tool in the same pattern as Buffer Cartridge ①.<br>9. Place back the punched Cartridge on the Setup Tray. |
|  | 10. Insert the sample tube on to the rack according to the number of samples.<br>11. Insert the sample into the sample tube. |
|  | 12. Place the sample tube rack from step 11 onto the Setup Tray. |
|  | 13. Place the Waste Tray on the Setup Tray (between the tube rack and the Buffer Cartridge ②. |

## 3. RUN (Not used PC)

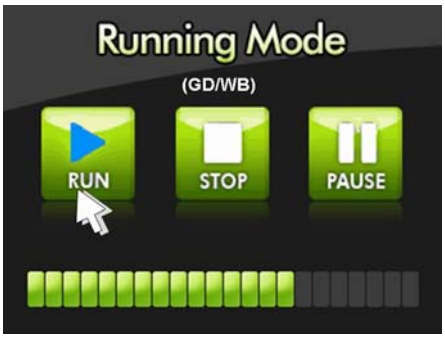
| | |
|---|---|
|  | 1. Connect the power cable to the rear of the instrument and separate the LAN cable of the instrument. |
| | 2. Press the 'Store Off' button to turn the Cooling Block and cooling fan on. The Cooling Block maintains the Elution Tube Rack at a low temperature to keep the eluted nucleic acids and nucleic acid-diagnostic kit mix refrigerated. |
| | 3. Press the '**START'** button to access the *PREP SETUP* screen. |
|  | 4. Refer to the code list within this Manual or purchased Kit Manual to select the three-digit code (**38 page**) applicable to your desired nucleic acid and sample source type.<br>5. Verify the **'Prep Type'** and **'Sample SRC'** of the three-digit code you have entered.<br>6. Press the **'Enter'** button to access the '**elution volume**' selection menu. |

## 3. RUN ( Not used PC) (Continued)




7. Select the 'elution volume' from the LCD touchscreen.
8. After selecting the desired 'elution volume' press **'ok'** to complete PREP SETUP.

9. Open the instrument door and pull out the Base Plate.
10. Place all racks and Buffer Cartridges in their respective locations on the Base Plate according to the **CHECK LIST (17 page)** on the LCD touchscreen.




11. Verify the name of the target nucleic acid type and sample source type on the Running Mode screen, and press the '**RUN'** button.
    - Progress of the extraction run can be checked through the progress bar on the lower portion of the LCD touchscreen.

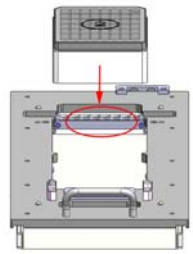
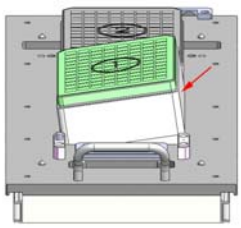
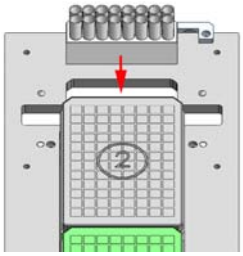
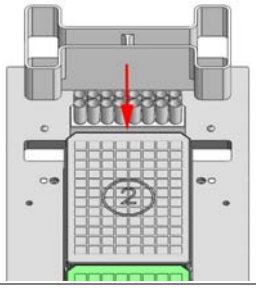
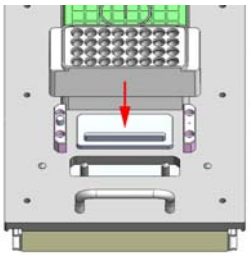
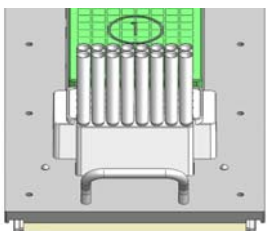
12. You may press the '**STOP**' button during the run to terminate the extraction.
    - If you press '**STOP**' during an extraction run, a popup prompt asking you whether you are sure ('Are you sure?') will appear. Select **'Yes'** to terminate the run, or **'No'** to cancel the stop and proceed with the extraction run.
    - You may select **'PAUSE'** to temporarily stop the run and '**RUN**' to resume.

## 3. RUN( Not used PC) (Continued)

13. After the extraction run is complete, pull out the Base Plate and remove the Elution tubes, Buffer Cartridges and all racks from the Base Plate. After removing all accessories, push the Base Plate back in completely and close the door.
14. You are given three options at this point:
    - **Still remains same work:** Repeat the current protocol.
    - **Do other work:** Perform an extraction run using a different protocol for another nucleic acid and sample source type.
    - **Finish:** Finish and exit.

15. If the automatic UV-sterilization option is enabled, a popup prompt will appear warning you not to open the door as UV sterilization is in progress. Details can be found in page 31.
16. Press the '**START**' button to initiate sterilization
    - Select '**SKIP**' if you wish to pass sterilization.
17. The sterilization process takes 5 minutes. Progress can be checked through the progress bar.
18. Remove the contamination protection accessory (Tip protector, Contamination shield). Detail can be found in page 11.
19. Press the 'Store On' button to turn the Cooling Block and cooling fan off.

**※ Setup process according to the CHECK LIST**

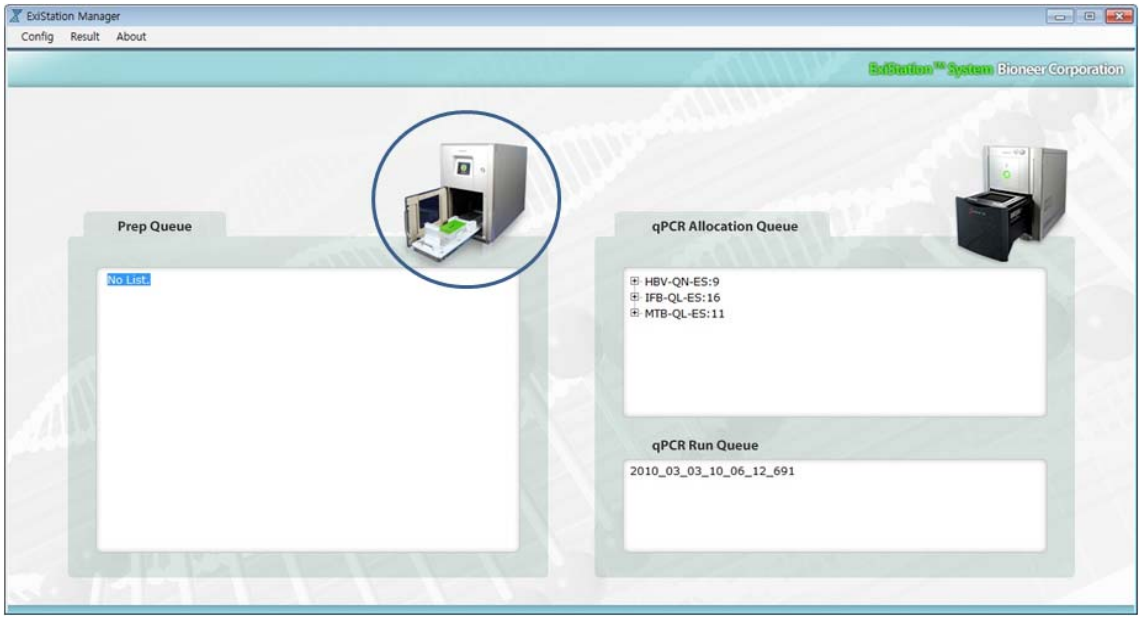
| | |
|---|---|
|  | 1. Place the Buffer Cartridge ② on the heating block of the base plate.<br>➢ If Buffer Cartridge ② is not properly placed on the heating block, it may cause an experiment failure or an instrument malfunction. |
|  | 2. Place the Buffer Cartridge ① on the base plate.<br>➢ Place the Buffer Cartridge ① by putting the cartridge to the left side of the base plate and press right-hand side of the Cartridge to press the Cartridge to secure. |
|  | 3. Place the Sample tube rack on the base plate.<br>➢ Be careful that the Sample tube rack's front and rear sides are properly placed. |
|  | 4. Place the Waste tray in between the Sample tube rack and the Buffer Cartridge ②. |
|  | 5. Place the Elution tube rack on the base plate.<br>➢ Check the Protection Cap is properly secured on the elution tube rack.<br><br>**WARNING!**<br>Be careful with the Aluminum sheet of the Protection Cap. |
|  | 6. Place the Disposable tip rack on the base plate.<br>7. Push the Base plate all the way inside the instrument and close the door. |

.

# VI. *ExiStation*™ Manager Software

1) Press the instrument power button located on the upper-right side to turn the instrument on. Initialize the instrument by pressing the power icon initially displayed on the LCD touch screen.

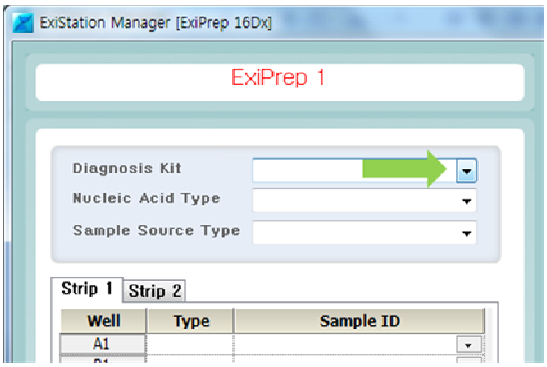
2) Execute the *ExiStation*™ Manager Software on the computer.



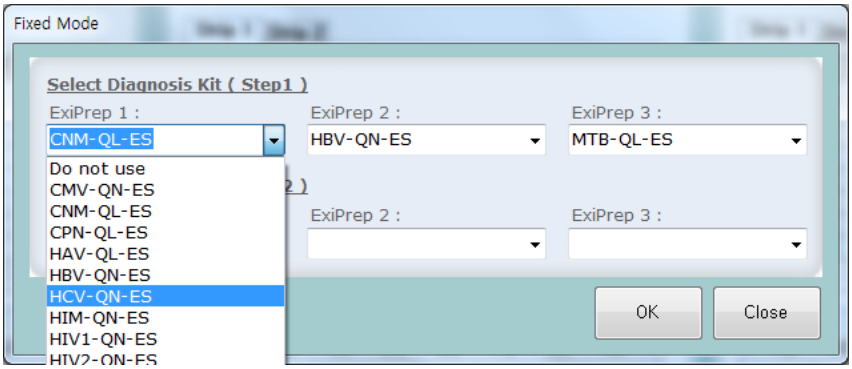

3) Clicking on the *ExiPrep*™ image will execute the *ExiPrep*™16 Dx control software module. The software module is pictured below.

## VI. *ExiStation*™ Manager Software (continued)

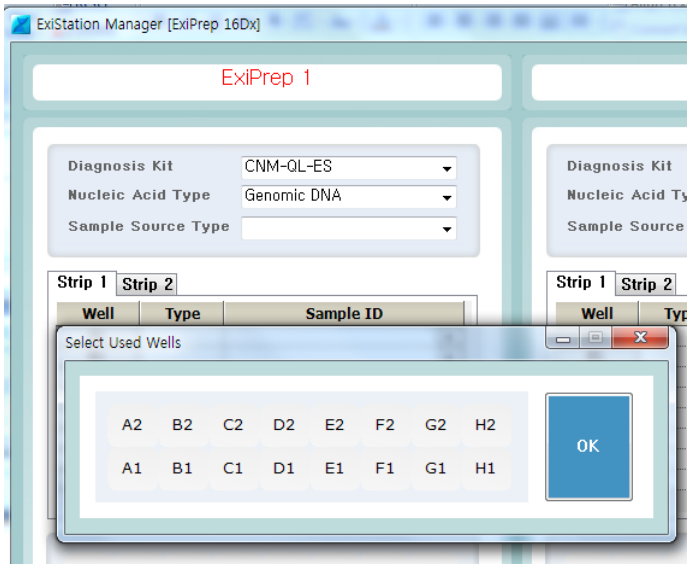
4) Click the pull-down arrow for 'Diagnosis Kit.' A popup will appear.



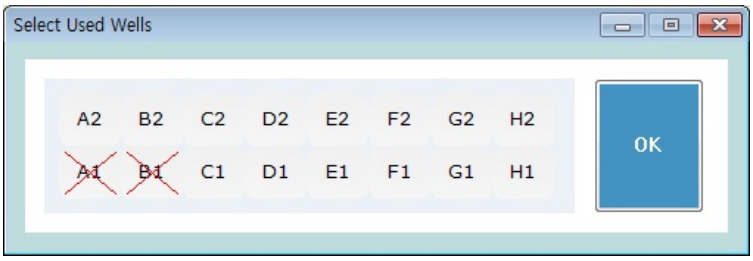

5) Select the diagnostic kit to be used for the experiment from the pull-down menus.




6) Select and verify the 'Sample Source Type' selection. A popup prompting user input on the usage of the Buffer Cartridges will appear. Inspect the Buffer Cartridges and mark the used wells by clicking on the corresponding locations. Select 'OK' to finish.

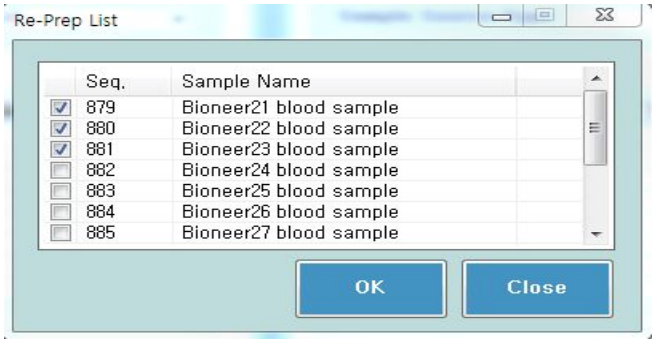


## VI. *ExiStation*™ Manager Software (continued)

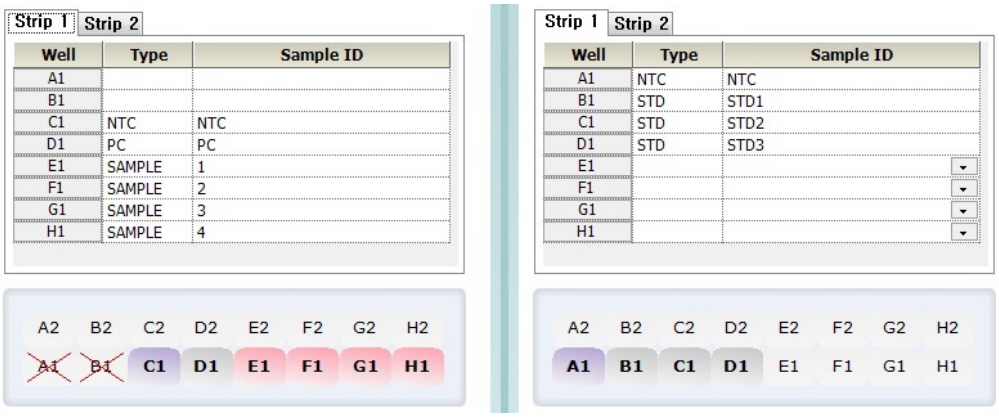



7) The program will automatically allocate the NTC and PC wells. The default setting is one (1) each of NTC and PC. The number of NTC and PC wells can be changed through the *ExiStation*™ Manager Software.

8) Samples needing re-examination will be displayed during this step. Select the samples to re-examine and the software will automatically assign them to the appropriate wells.

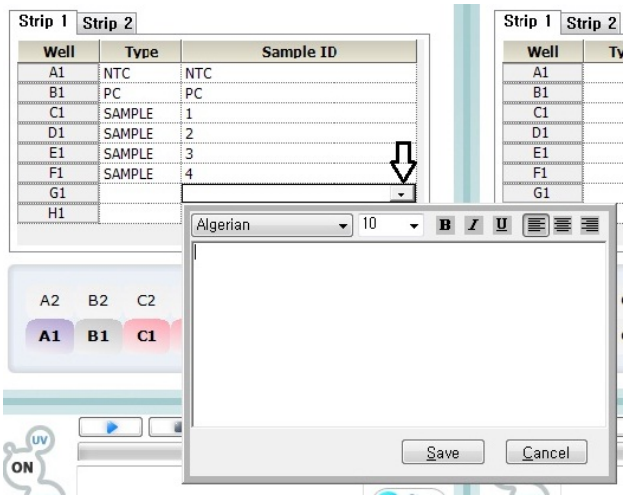



9) The locations of the non-template control (NTC) and positive control (PC) will be automatically allocated. The default settings are one each of NTC and PC. To modify the default NTC and PC replicates, go to the Config>Settings menu of the *ExiStation*™ Manager Software window.

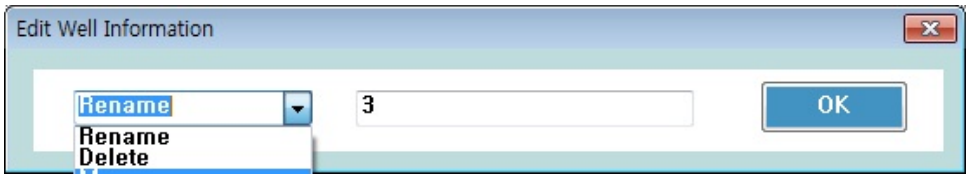


## VI. *ExiStation*™ Manager Software (continued)

10) Click the 'Sample ID' box and use a (optional) barcode reader or keyboard to enter sample information.

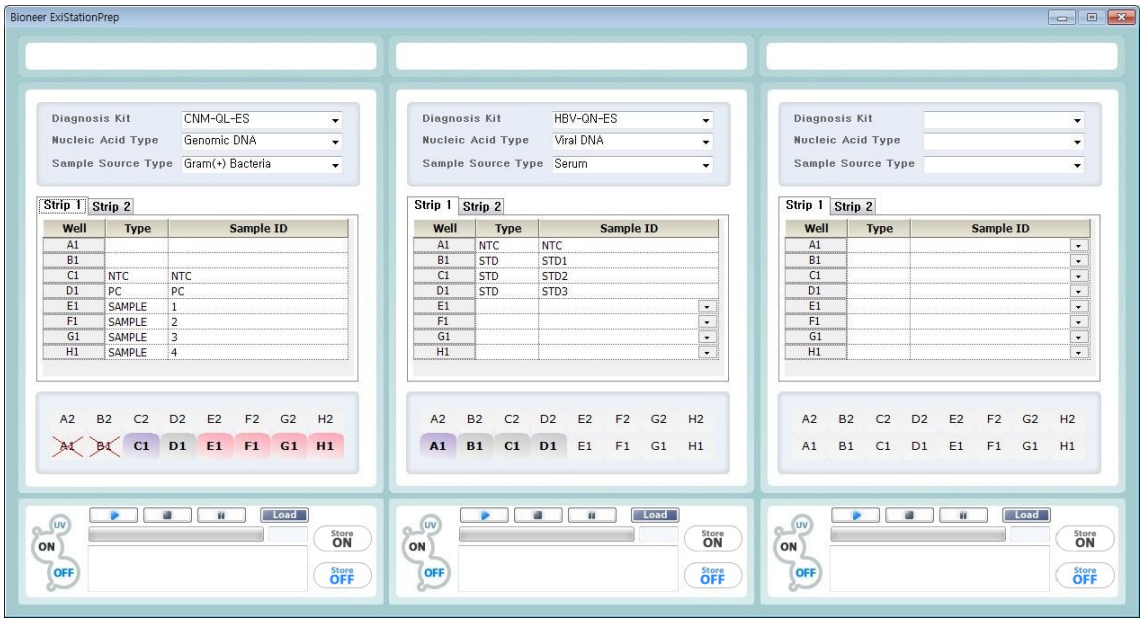



11) If you need to change sample ID information, click on the well number to summon a popup window. You may rename or delete the sample information and move the well to a different location. For example, to move the sample to a different well, select ‘Move’ from the first drop-down menu and select the desired well coordinate from the second drop-down menu.



12) Press ‘OK’ after the desired changes have been made. If you need to modify information of other wells, repeat steps 10) ~ 11) for all relevant wells.

## VI. *ExiStation*™ Manager Software (continued)




13) Click the 'RUN(▶)' button to initiate nucleic acid extraction.

14) After the extraction is complete, remove the samples (Diagnostic Kit tubes containing eluted material) and immediately run real-time PCR.
15) Pull out the Base Plate and remove all accessories including Elution tubes, Buffer Cartridges and Tips. After all accessories are removed, push the Base Plate back completely and close the door.
16) Press the 'UV-On' button to initiate UV sterilization of the instrument chamber.

## VI. *ExiStation*™ Manager Software (continued)

17) The UV sterilization process will take 5 minutes. Progress can be verified through the progress bar displayed on the instrument LCD touchscreen panel.
18) After click on the “Load” button, removes the tip protector and the contamination shield.

# VII. *ExiPrep*™16 Dx Setup

## 1. Main Menu

- Once the initialization has completed successfully, the LCD touchscreen will display the MENU as shown below.
- Please contact Bioneer Customer Service or your local sales representative if the initialization progress bar does not change for over 5 minutes during initialization or if the MENU screen does not appear after initialization.

**Main Menu**

| Icon | Description |
|---|---|
| | ■ **Network Connection**<br>➢ This icon allows you to determine if the *ExiPrep*™16 Dx is connected to the PC. If the icon is present, it means that the instrument is connected to the PC via network and is possible to use the *ExiStation*™ Manager Software to control the instrument. |
| | ■ **Cooling Fan Operation**<br>➢ The Cooling Fan icon allows you to determine the status of the cooling fan. 'STORE OFF' means that the cooling fan is not operating, and 'STORE ON' means that the cooling fan is currently running.<br>➢ In order to keep the diagnostic kits refrigerated, you must press this icon on the LCD touchscreen or click the 'STORE ON' icon in the *ExiStation*™ Manager Software to turn the cooling fan on. |
| | ■ **Contamination protection accessory installation**<br>➢ This icon is to determine the status of the syringe block for setting the Tip Protector and the contamination shield. |
| | ■ **Power**<br>➢ This icon is to be pressed when power rebooting the instrument. |

# VII. *ExiPrep*™16 Dx Setup (Continued)

## 1. Main Menu (continued)

### 1) PREP SETUP

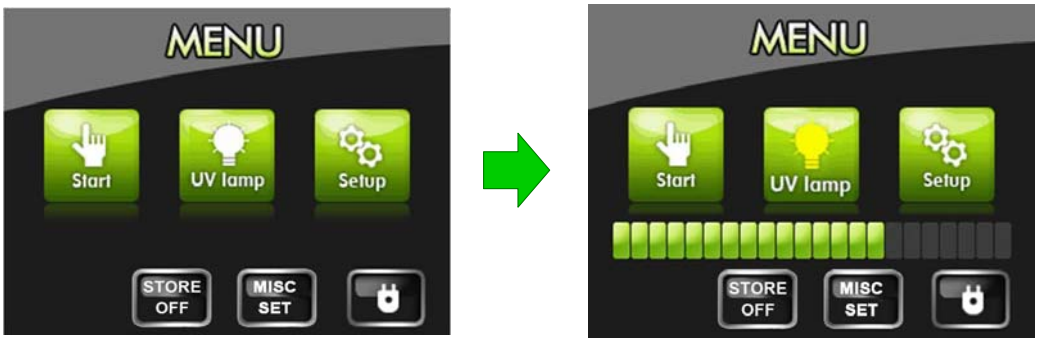
**MENU Screen** **PREP SETUP Screen**

- Selecting '**Start**' from the Main Menu will bring up the '**PREP SETUP**' screen where you can enter the three-digit code for the extraction and sample source type.
- Refer to the code list within this Manual to select the three-digit code(38 page) applicable to your desired nucleic acid and sample source type.
- **Do not use this menu when operating the instrument through the *ExiStation*™ Manager Software.**

# VII. *ExiPrep*™16 Dx Setup (Continued)

## 1. Main Menu (continued)

### 2) UV sterilization (UV lamp)



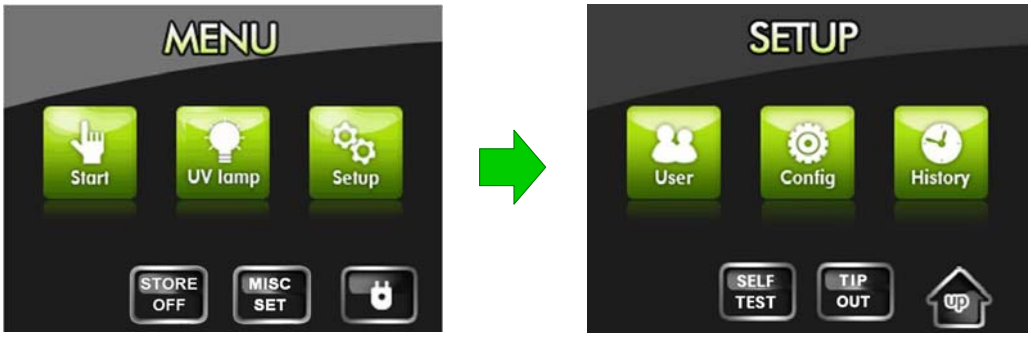

**MENU Screen** **UV Sterilization Screen**

- Use the built-in UV-lamp to sterilize the internal cavity of the instrument.
- Press the **'UV lamp'** icon to initiate the UV sterilization process. The icon will turn yellow as UV sterilization proceeds.
- The sterilization runs for 5 minutes. The progress can be tracked through the progress bar displayed on the bottom portion of the LCD touchscreen. To cancel the sterilization process, press the '**UV lamp'** button again.
- **You may also use the *ExiStation*™ Manager Software to toggle the UV sterilization function.**

# VII. *ExiPrep*™16 Dx Setup (Continued)

## 1. Main Menu (continued)

### 3) System setup menu (SETUP)




**Main Menu Screen** **Setup Screen**

| Icon | Description |
|---|---|
| | ■ **User registration menu**<br>➢ You may create new accounts through this menu. Details on account creation can be found in page 28. |
| | ■ **System configuration menu**<br>➢ Allows you to restrict non-registered users from accessing features such as UV sterilization and system preferences. Details on system configuration can be found in page 32**.** |
| | ■ **History**<br>➢ Enabled by selecting the user login option.<br>➢ Allows you to audit up to 99 most recent runs by displaying information such as user ID, operation record and the instrument status (successful, cancelled) of a particular run.<br>➢ Details can be found in page 29. |
| | ■ **Self Test**<br>➢ This icon is for testing each motor initialization and heater block Temperature. |
| | ■ **Tip Out**<br>➢ This icon is for removing the Disposable Tips from the instrument Syringe Block. Pressing this icon will release the tips immediately. |

# VII. *ExiPrep*™16 Dx Setup (Continued)

## 2. Registering a New User

*ExiPrep*™16 Dx provides a user login option restricting the use of the instrument to registered users only. Enabling the user login option will limit non-user access to the instrument. Do not forget your user ID if you have enabled the user login option

| | |
|---|---|
| | 1. Press the '**Setup'** button to access the SETUP menu. |
| | 2. Press the '**User**' button to access the User Registration menu. |
| | 3. Enter a 6-digit user ID using the keypad on the LCD touch screen and press '**Enter**' to save the ID.<br>➢ **Delete**: Delete last number entered.<br>➢ **Clear**: Delete all numbers entered.<br>➢ **Enter**: Save the numbers entered. |
| | 4. Verify the user ID and press **'ok'** to complete the registration.<br>➢ If the login option is enabled, non-registered use will have limited access to the instrument.<br>➢ Do not forget your user ID. |

※ Up to 50 users can be registered. You can manage non-used user IDs using the administrator menu (page 33).

# VII. *ExiPrep*™ 16 Dx Setup (continued)

## 3. Viewing Run History

If the login option is enabled, the user ID, process type and run status of each run is saved. Up to 99 most recent runs are saved in memory.

<table>
<tr>
<td>
</td>
<td>1. Press the ‘Setup’ button to access the SETUP menu.</td>
</tr>
<tr>
<td>
</td>
<td>2. Press the ‘History’ button to view the instrument run history.</td>
</tr>
<tr>
<td>
</td>
<td>3. The run history contains the following parameters:<br>➢ No.: Recent runs have a lower number.<br>➢ User ID: The 6-digit user ID.<br>➢ Work: An abbreviation of sample source and protocol type selected for that run.<br>➢ Status: Instrument report on whether nucleic acid extraction was successfully completed(OK), stopped during the run (Abort), or cancelled by the user (Canceled).</td>
</tr>
</table>

# VII. *ExiPrep*™ 16 Dx Setup (continued)

## 4. Managing the Login Mode

The instrument provides a login mode for restricting non-registered use. Without a user ID, you would have limited access to instrument functions. Do not forget your user ID.

| | |
|---|---|
| | 1. Press the '**Setup'** button to access the SETUP menu. |
| | 2. Press the '**Config'** button to access the System Setup menu. |
| <br> | 3. Press the '**User**' button to enable login mode.<br>➢ If the login mode is enabled, a popup prompt (**User Mode ON**) appears and the user icon will turn blue.<br>➢ Press the '**User**' button again to disable user login mode. A popup prompt (**User Mode OFF**) appears and the user icon will turn white. |

※ Entering an invalid user ID three consecutive times with user login mode enabled will shut down the system. Press the '**Power'** icon on the LCD touchscreen to restart.

# VII. *ExiPrep*™ 16 Dx Setup (continued)

## 5. Managing the Automatic UV-Sterilization Mode

The instrument provides an automatic UV-Sterilization mode to sterilize the instrument after every DNA/ RNA extraction run.

| | |
|---|---|
| | 1. Press the '**Setup'** button to access the SETUP menu. |
| | 2. Press the '**Config**' button to access the System Setup menu. |
| <br> | 3. Press the '**UV lamp**' button to enable automatic UV sterilization.<br>➢ If automatic UV-sterilization is enabled, a popup prompt (**UV Mode ON**) appears and the UV lamp icon will turn yellow.<br>➢ Press the '**UV lamp**' button again to disable the mode. A popup prompt (**UV Mode OFF**) appears and the UV Lamp icon will turn white. |

# VII. *ExiPrep*™ 16 Dx Setup (continued)

## 6. Configuring the System

Only the single user with a registered administrator ID is able to configure the system. Do not forget the administrator ID.

<table>
<tr><td>
</td><td colspan="4">1. Press the ‘Config’ Button from the System Setup menu to access the System Config menu.</td></tr>
<tr><td rowspan="2">
</td><td>
<br>Calibrates the screen position</td><td>
<br>Adjusts the screen brightness</td><td>
<br>Manages user IDs as well as administrator ID</td><td>
<br>Accessible only by authorized engineers</td></tr>
<tr><td colspan="4">
<br>■ Screen: Calibrates the screen position<br>➢ Calibrate the screen position relative to touching.<br>➢ Press and hold the circle at the upper left corner with a blunt tool for 2 seconds.<br>➢ Press and hold the circle at the bottom right corner with a blunt tool for 2 seconds.</td></tr>
<tr><td>
</td><td colspan="4">■ Bright: Screen brightness adjustment<br>➢ Adjust the brightness of the LCD touchscreen using the ‘+’ and ‘–’ buttons.<br>➢ Press the ‘ok’ button to save the adjusted brightness level. The previous menu will be displayed when the new brightness setting is successfully applied.<br>➢ To return to the previous menu without saving the adjustments, press the ‘up’ button.</td></tr>
</table>

**※ Factory (A/S menu): Only authorized service engineers may access this menu to service the instrument.**

# VII. *ExiPrep*™ 16 Dx Setup (continued)

## 7. Administrator Management

| | |
|---|---|
| | 1. Press the '**Admin**' button from the System Config menu to access the Admin Access menu. |
| | 2. Enter the 6-digit administrator ID using the keypad on the LCD touchscreen.<br>3. Press the '**Enter'** button. |
| | 4. The Admin Menu screen includes an option to delete user IDs or change the administrator ID.<br>➢ Select **'User list delete (1)'** to delete unused IDs.<br>➢ Select '**Administrator password change (2)'** to change the factory default administrator ID. |
| | ■ **User list delete menu (User List)**<br>➢ **Registered User:** Displays the number of registered users.<br>➢ Select the user ID you wish to delete and press '**ok**' to confirm deletion.<br>➢ Use the '**back**' or '**next'** buttons to navigate the pages. |

# VII. *ExiPrep*™ 16 Dx Setup (continued)

## 7. Administrator (continued)

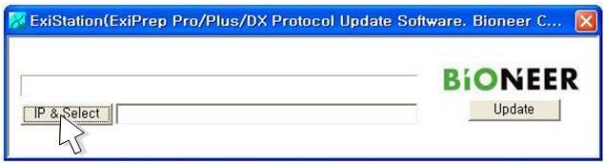
<table>
<tr>
<td>
</td>
<td>■ Administrator ID change menu<br>➢ Enter a new 6-digit administrator ID using the keypad in the middle of LCD touchscreen and press ‘Enter’ button to save.</td>
</tr>
<tr>
<td>
</td>
<td>➢ Press the ‘ok’ button to save new administrator ID after verifying the new administrator ID.<br>➢ You may now use the new administrator ID to delete user IDs or setup and configure the system.<br>➢ Do not forget new administrator ID.</td>
</tr>
</table>

# VIII. Updating the *ExiPrep*™ 16 Dx

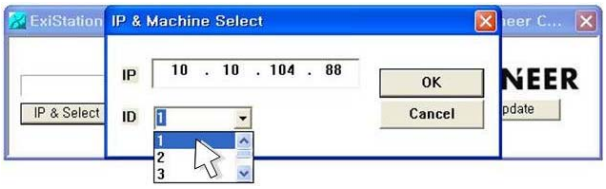
- Updating software may improve instrument functionality and install up-to-date protocols for nucleic acid extraction.
- Please refer to the FAQ in our homepage or contact Bioneer Service Center if updating does not progress as described below or you have questions.

**NOTE:** This program NOT included with the instrument. If you want to the program, you have to request to us.

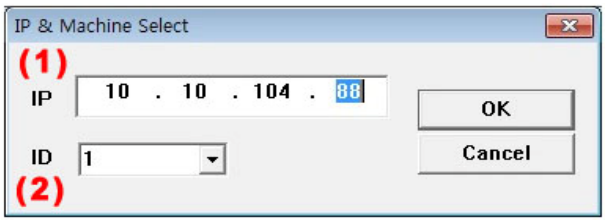
1. Connect *ExiPrep*™16 Dx to your computer using **Cross-type LAN cable**.
2. Start the installation of the downloaded program below.
   - **The IP address and network hub LAN port settings may change depending on the installation site and PC.**



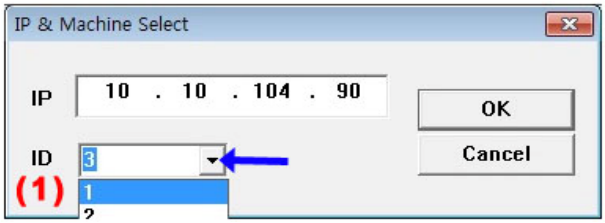

1. Execute the program.
2. Click the 'IP & Select' button on the lower left corner.




3. A new window 'IP & Machine Select' will appear with two boxes: IP and ID.




4. There are two ways of connecting to the instrument network.
   - Directly enter the IP address into the IP box (1) and select the instrument ID (2). For example, if the IP address is '10.10.104.88', select ID '1' and click 'OK'.

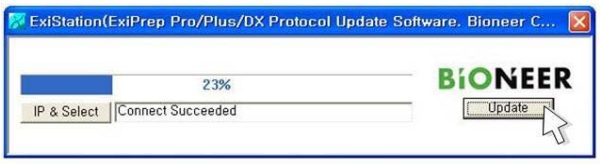



5. Clicking on the small down arrow (blue arrow) will enable you to select several instrument IDs with corresponding IP addresses. Click 'OK' to finish connecting to the instrument.

6. If the connection succeeds, the 'Connect Succeeded' prompt will be displayed.

## VIII. Updating the *ExiPrep*™16 Dx (Continued)

7. If the connection fails, the 'connect fail' prompt will be displayed. In this case, reboot the instrument and network hub, and verify that the network cable is connected correctly. Also verify the PC network settings including the IP address

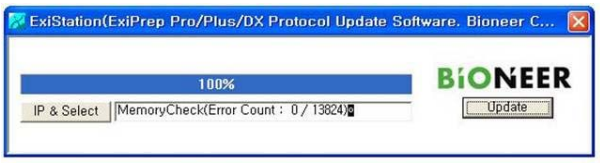



8. After the connection is completed, click the 'Update' button on the right side. Wait until the progress bar is full.
   - ➢ If the connection stops progressing, restart the update process from step 1.

9. Once the connection process is done, 'Memory Check starts' window will pop up.

10. Click 'OK'.

    - ➢ If the connection stops progressing, restart the update process from step 1.



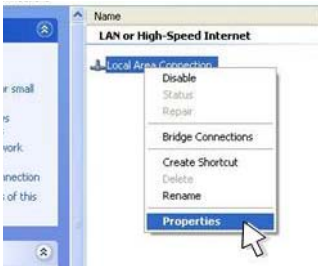

11. Once 'Memory Check' starts, the progress status bar will be displayed.

12. When the Memory Check finishes the progress, 'Write and Read memory check results to matches' window will pop up.
13. Press 'OK' button.

14. If you get the 'Finish' message on the progress bar, all the update process.
15. Disconnect the LAN cable from the computer and the instrument.
16. Reboot the instrument and reconnect the LAN cable.

**※ The IP address may change depending on the installation site and PC.**

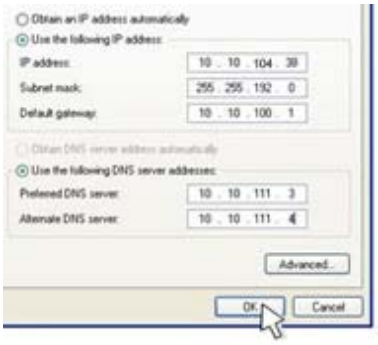
※ If the PC fails to connect to the instrument, try the following steps.




1. Select **'Local Area Connection'** from the control panel.
2. Right-click the connection and select **'Properties'**.

3. Select **'Internet Protocol (TCP/IP)'**.

4. Select **'Use the following IP address'**.




5. Enter the **IP address, subnet mask, Default gateway and DNS server address** information below:
   IP address: 10. 10. 104. 38
   Subnet mask: 255. 255. 192. 0
   Default gateway: 10. 10. 100. 1
   Preferred DNS server: 10. 10. 111. 3
   (Alternate DNS server: 10. 10. 111. 4)
6. Click the **'OK'** button commit the network changes.

## IX. DNA/ RNA Extraction Program Number List

| No. | | Target | Sample source |
|---|---|---|---|
| 1 | 01 | Genomic DNA | Whole blood |
| 1 | 02 | Genomic DNA | Animal tissue |
| 1 | 03 | Genomic DNA | FFPE tissue |
| 1 | 04 | Genomic DNA | Plant tissue |
| 1 | 05 | Genomic DNA | Plant seed |
| 1 | 06 | Genomic DNA | Rice |
| 1 | 07 | Genomic DNA | Cultured cell |
| 1 | 08 | Genomic DNA | Gram (+) bacteria |
| 1 | 09 | Genomic DNA | Gram (-) bacteria |
| 1 | 10 | Genomic DNA | Yeast |
| 1 | 11 | Genomic DNA | Fungi |
| 1 | 12 | Genomic DNA | Plasma |
| 1 | 13 | Genomic DNA | Serum |
| 1 | 14 | Genomic DNA | Buffy coat |
| 1 | 15 | Genomic DNA | Sputum |
| 1 | 16 | Genomic DNA | BAL |
| 1 | 17 | Genomic DNA | Saliva |
| 1 | 18 | Genomic DNA | Swab |
| 1 | 19 | Genomic DNA | Urine |
| 1 | 20 | Genomic DNA | Stool |
| 1 | 21 | Genomic DNA | Cell free body fluid |
| 1 | 22 | Genomic DNA | Pleural fluid |
| 1 | 23 | Genomic DNA | CSF |
| 1 | 24 | Genomic DNA | EPS |
| 1 | 25 | Genomic DNA | Respiratory sample |
| 1 | 26 | Genomic DNA | Amniotic fluid |
| 1 | 27 | Genomic DNA | Forensic sample |
| 1 | 28 | Genomic DNA | Bone marrow |
| 1 | 29 | Genomic DNA | Bone |
| 1 | 30 | Genomic DNA | Dried blood spot |
| 1 | 31 | Genomic DNA | Soil |
| 1 | 32 | Genomic DNA | Hair |
| 1 | 33 | Genomic DNA | Cell supernatant |

| No. | | Target | Sample source |
|---|---|---|---|
| 2 | 01 | Total RNA | Whole blood |
| 2 | 02 | Total RNA | Animal tissue |
| 2 | 03 | Total RNA | FFPE tissue |
| 2 | 04 | Total RNA | Plant tissue |
| 2 | 05 | Total RNA | Plant seed |
| 2 | 06 | Total RNA | Rice |
| 2 | 07 | Total RNA | Cultured cell |
| 2 | 08 | Total RNA | Gram (+) bacteria |
| 2 | 09 | Total RNA | Gram (-) bacteria |
| 2 | 10 | Total RNA | Yeast |
| 2 | 11 | Total RNA | Fungi |
| 2 | 12 | Total RNA | Plasma |
| 2 | 13 | Total RNA | Serum |
| 2 | 14 | Total RNA | Buffy coat |
| 2 | 15 | Total RNA | Sputum |
| 2 | 16 | Total RNA | BAL |
| 2 | 17 | Total RNA | Saliva |
| 2 | 18 | Total RNA | Swab |
| 2 | 19 | Total RNA | Urine |
| 2 | 20 | Total RNA | Stool |
| 2 | 21 | Total RNA | Cell free body fluid |
| 2 | 22 | Total RNA | Pleural fluid |
| 2 | 23 | Total RNA | CSF |
| 2 | 24 | Total RNA | EPS |
| 2 | 25 | Total RNA | Respiratory sample |
| 2 | 26 | Total RNA | Amniotic fluid |
| 2 | 27 | Total RNA | Forensic sample |
| 2 | 28 | Total RNA | Bone marrow |
| 2 | 29 | Total RNA | Bone |
| 2 | 30 | Total RNA | Dried blood spot |
| 2 | 31 | Total RNA | Soil |
| 2 | 32 | Total RNA | Hair |
| 2 | 33 | Total RNA | Cell supernatant |

| No. | | Target | Sample source |
|---|---|---|---|
| 3 | 01 | mRNA | Whole blood |
| 3 | 02 | mRNA | Animal tissue |
| 3 | 03 | mRNA | FFPE tissue |
| 3 | 04 | mRNA | Plant tissue |
| 3 | 05 | mRNA | Plant seed |
| 3 | 06 | mRNA | Rice |
| 3 | 07 | mRNA | Cultured cell |
| 3 | 08 | mRNA | Gram (+) bacteria |
| 3 | 09 | mRNA | Gram (-) bacteria |
| 3 | 10 | mRNA | Yeast |
| 3 | 11 | mRNA | Fungi |
| 3 | 12 | mRNA | Plasma |
| 3 | 13 | mRNA | Serum |
| 3 | 14 | mRNA | Buffy coat |
| 3 | 15 | mRNA | Sputum |
| 3 | 16 | mRNA | BAL |
| 3 | 17 | mRNA | Saliva |
| 3 | 18 | mRNA | Swab |
| 3 | 19 | mRNA | Urine |
| 3 | 20 | mRNA | Stool |
| 3 | 21 | mRNA | Cell free body fluid |
| 3 | 22 | mRNA | Pleural fluid |
| 3 | 23 | mRNA | CSF |
| 3 | 24 | mRNA | EPS |
| 3 | 25 | mRNA | Respiratory sample |
| 3 | 26 | mRNA | Amniotic fluid |
| 3 | 27 | mRNA | Forensic sample |
| 3 | 28 | mRNA | Bone marrow |
| 3 | 29 | mRNA | Bone |
| 3 | 30 | mRNA | Dried blood spot |
| 3 | 31 | mRNA | Soil |
| 3 | 32 | mRNA | Hair |
| 3 | 33 | mRNA | Cell supernatant |

| No. | | Target | Sample source |
|---|---|---|---|
| 4 | 01 | viral DNA | Whole blood |
| 4 | 02 | viral DNA | Animal tissue |
| 4 | 03 | viral DNA | FFPE tissue |
| 4 | 04 | viral DNA | Plant tissue |
| 4 | 05 | viral DNA | Plant seed |
| 4 | 06 | viral DNA | Rice |
| 4 | 07 | viral DNA | Cultured cell |
| 4 | 08 | viral DNA | Gram (+) bacteria |
| 4 | 09 | viral DNA | Gram (-) bacteria |
| 4 | 10 | viral DNA | Yeast |
| 4 | 11 | viral DNA | Fungi |
| 4 | 12 | viral DNA | Plasma |
| 4 | 13 | viral DNA | Serum |
| 4 | 14 | viral DNA | Buffy coat |
| 4 | 15 | viral DNA | Sputum |
| 4 | 16 | viral DNA | BAL |
| 4 | 17 | viral DNA | Saliva |
| 4 | 18 | viral DNA | Swab |
| 4 | 19 | viral DNA | Urine |
| 4 | 20 | viral DNA | Stool |
| 4 | 21 | viral DNA | Cell free body fluid |
| 4 | 22 | viral DNA | Pleural fluid |
| 4 | 23 | viral DNA | CSF |
| 4 | 24 | viral DNA | EPS |
| 4 | 25 | viral DNA | Respiratory sample |
| 4 | 26 | viral DNA | Amniotic fluid |
| 4 | 27 | viral DNA | Forensic sample |
| 4 | 28 | viral DNA | Bone marrow |
| 4 | 29 | viral DNA | Bone |
| 4 | 30 | viral DNA | Dried blood spot |
| 4 | 31 | viral DNA | Soil |
| 4 | 32 | viral DNA | Hair |
| 4 | 33 | viral DNA | Cell supernatant |

| No. | Target | Sample source |
|---|---|---|
| 5 01 | viral RNA | Whole blood |
| 5 02 | viral RNA | Animal tissue |
| 5 03 | viral RNA | FFPE tissue |
| 5 04 | viral RNA | Plant tissue |
| 5 05 | viral RNA | Plant seed |
| 5 06 | viral RNA | Rice |
| 5 07 | viral RNA | Cultured cell |
| 5 08 | viral RNA | Gram (+) bacteria |
| 5 09 | viral RNA | Gram (-) bacteria |
| 5 10 | viral RNA | Yeast |
| 5 11 | viral RNA | Fungi |
| 5 12 | viral RNA | Plasma |
| 5 13 | viral RNA | Serum |
| 5 14 | viral RNA | Buffy coat |
| 5 15 | viral RNA | Sputum |
| 5 16 | viral RNA | BAL |
| 5 17 | viral RNA | Saliva |
| 5 18 | viral RNA | Swab |
| 5 19 | viral RNA | Urine |
| 5 20 | viral RNA | Stool |
| 5 21 | viral RNA | Cell free body fluid |
| 5 22 | viral RNA | Pleural fluid |
| 5 23 | viral RNA | CSF |
| 5 24 | viral RNA | EPS |
| 5 25 | viral RNA | Respiratory sample |
| 5 26 | viral RNA | Amniotic fluid |
| 5 27 | viral RNA | Forensic sample |
| 5 28 | viral RNA | Bone marrow |
| 5 29 | viral RNA | Bone |
| 5 30 | viral RNA | Dried blood spot |
| 5 31 | viral RNA | Soil |
| 5 32 | viral RNA | Hair |
| 5 33 | viral RNA | Cell supernatant |

| No. | Target | Sample source |
|---|---|---|
| 6 01 | viral DNA/ RNA | Whole blood |
| 6 02 | viral DNA/ RNA | Animal tissue |
| 6 03 | viral DNA/ RNA | FFPE tissue |
| 6 04 | viral DNA/ RNA | Plant tissue |
| 6 05 | viral DNA/ RNA | Plant seed |
| 6 06 | viral DNA/ RNA | Rice |
| 6 07 | viral DNA/ RNA | Cultured cell |
| 6 08 | viral DNA/ RNA | Gram (+) bacteria |
| 6 09 | viral DNA/ RNA | Gram (-) bacteria |
| 6 10 | viral DNA/ RNA | Yeast |
| 6 11 | viral DNA/ RNA | Fungi |
| 6 12 | viral DNA/ RNA | Plasma |
| 6 13 | viral DNA/ RNA | Serum |
| 6 14 | viral DNA/ RNA | Buffy coat |
| 6 15 | viral DNA/ RNA | Sputum |
| 6 16 | viral DNA/ RNA | BAL |
| 6 17 | viral DNA/ RNA | Saliva |
| 6 18 | viral DNA/ RNA | Swab |
| 6 19 | viral DNA/ RNA | Urine |
| 6 20 | viral DNA/ RNA | Stool |
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| 6 22 | viral DNA/ RNA | Pleural fluid |
| 6 23 | viral DNA/ RNA | CSF |
| 6 24 | viral DNA/ RNA | EPS |
| 6 25 | viral DNA/ RNA | Respiratory sample |
| 6 26 | viral DNA/ RNA | Amniotic fluid |
| 6 27 | viral DNA/ RNA | Forensic sample |
| 6 28 | viral DNA/ RNA | Bone marrow |
| 6 29 | viral DNA/ RNA | Bone |
| 6 30 | viral DNA/ RNA | Dried blood spot |
| 6 31 | viral DNA/ RNA | Soil |
| 6 32 | viral DNA/ RNA | Hair |
| 6 33 | viral DNA/ RNA | Cell supernatant |

| No. | | Target | Sample source |
|---|---|---|---|
| 7 | 01 | Plasmid DNA | *endA*(+) strain |
| 7 | 02 | Plasmid DNA | *endA*(-) strain |
| | | | |
| **No.** | | **Target** | **Sample source** |
| 8 | 21 | Fragment DNA | Gel slice |
| 8 | 22 | Fragment DNA | PCR product |
| 8 | 23 | Fragment DNA | Enzymatic reaction |

| No. | | Target | Sample source |
|---|---|---|---|
| 9 | 01 | Protein | His-Tag |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

# X. Troubleshooting

| Error | Solution |
|---|---|
| The Power is not on. | 1. Make sure the power connector is connected.<br>2. Check if the system is connected to the adaptor.<br>3. Check if the system power is pushed.<br>4. If everything above has been followed but the power is not on, contact After Service. |
| The Power is on but the system cannot initiate. | 1. Press the power button to block the power.<br>2. Check if the power was turned off abnormally.<br>3. When the system power was shut off abnormally, check if there are any residues in tips and/or accessories in the system.<br>4. Remove any residues that may distract operating the system.<br>5. Manually move the syringe block of the interior desktop in the center.<br>6. Turn the power on and check whether the system is initiating.<br>7. Request for After Service. |
| LCD Screen is not on. | 1. It may be interior problem of the system, call for the After Service. |
| The system does not operate even RUN button is pressed. | 1. Check if the bracket lock is removed.<br>2. Check if the system is initiating normally when the power is on.<br>3. Check if there are any residues or obstacles in the system that may interrupt operating.<br>4. Check if all the accessories are inserted correctly.<br>5. Check if other buttons in the LCD are working.<br>6. Request for After Service. |
| The system is running but does not operate correctly. | 1. Check if the base plate is placed correctly.<br>2. Check if there is remaining residues or any obstacles that may interrupt operating the system.<br>3. Check if all the accessories are inserted correctly.<br>4. Request for After Service. |
| The front door does not close. | 1. Check if the base plate is placed correctly.<br>2. After holding the door to open and when releasing the door to be closed, check if the door is closed automatically by the spring.<br>3. Request for After Service. |

| Error | Solution |
|---|---|
| The base plate does not slide in completely. | 1. Check if there are any obstacles or residues that may interrupt moving the base plate.<br>2. Check if all the accessories are inserted correctly.<br>3. Request for After Service. |
| The system is not working even if the door is closed. | 1. Check if base plate is located in the correct.<br>2. Check if the pair of magnet attached to the door is correctly attached.<br>3. Check if the switch installed at the end of the base plate slide rail is damaged when base plate is pulled out.<br>4. Request for After Service. |
| The base plate does not slide out completely. | 1. Check inside of the system if there are any obstacles or residues that may interrupt moving the base plate.<br>2. Check the front of the system if there are any obstacles or residues that may interrupt moving the base plate.<br>3. Request for After Service. |
| The accessories are not being able insert. | 1. Check if all the accessories are located in the right position.<br>2. Check if there are any residues in each accessories and the rack.<br>3. Check if any accessories and the rack's lock pins are bent or damaged.<br>4. Request for After Service. |
| During the operation, the syringe block does not pin down the tips. | 1. Check if the door is completely closed.<br>2. Check if the tip and the tip rack is inserted correctly.<br>3. While inserting the tips, check if any residues or accessories are stuck.<br>4. Check if 'Stop' or 'Pause' button is pressed.<br>5. Check if the provided tips are inserted.<br>6. Check if the tip is bent or damaged.<br>7. Request for After Service. |
| Syringe Block is correctly equipped with the tips, but it doesn't move. | 1. Make sure the front door is closed.<br>2. When the block is being moved, check if any residues or accessories are stuck.<br>3. Check if the cartridge is inserted correctly.<br>4. Check if 'Stop' or 'Pause' button is pressed.<br>5. Request for After Service. |

| Error | Solution |
|---|---|
| It stops while operating. | 1. Check if the power supplied into the system.<br>2. Check if the Power switch has been pressed.<br>3. In the lower part of LCD screen, check if there is a delay in the blue progress bar.<br>4. Check if you have pressed ‘Pause” by mistake.<br>5. Request for After Service. |
| The System is running but there is an error. | 1. Check if wrong protocol has been used.<br>2. Check if there is an error in the motor while operating during the movement of syringe block due to residues or accessories being stuck.<br>3. Check if it is operating after rerunning the same program.<br>4. Request for After Service. |
| The system is working but it does not do the elution. | 1. Check if Elution rack and tubes are inserted appropriately.<br>2. Check if the tips are inserted completely.<br>3. Check if the end of the tip is clogged.<br>4. Check if sample is inserted into the cartridge.<br>5. Check if there is any leakage in the syringe block.<br>6. Request for After Service. |
| There is a leakage in the syringe block. | 1. Stop using the well that were being used and request of after service. |
| The liquid is dripping in the bottom of the system. | 1. Check if the rack and the waste tray and other accessories are inserted in the right position.<br>2. Check if there is a leakage in the syringe block.<br>3. Request for After Service. |
| The heater is not working. | 1. Check if the rack and the waste tray and other accessories are inserted in the right position.<br>2. Check if any solution is dripped in the base plate during the usage.<br>3. Request for After Service. |
| There is a burning smell in the system. | 1. Disconnect the power and unplug the power connector immediately.<br>2. Request for After Service. |
| UV Lamp does not work. | 1. Check if the door is closed completely.<br>2. Request for After Service. |

| Error | Solution |
|---|---|
| The Sample Block does not maintain a cold temperature. | 1. Inspect the power supply.<br>2. Verify the Sample Block status through the LCD screen or PC software.<br>3. Request service from your dealer. |
| The cooling fan does not function. | 1. Inspect the power supply.<br>2. Verify the Sample Block status through the LCD screen or PC software.<br>3. Request service from your dealer. |
| Protocol dose not update. | 1. Check if the computer and the instrument are connected with LAN cable.<br>2. Restart the computer and instrument.<br>3. Update protocol<br>4. Re-update protocol |

| In case of use to *ExiStation*™ with PC | |
|---|---|
| **Error** | **Solution** |
| The PC software does not operate the instrument. | 1. Inspect the network cables connecting the PC and network hub.<br>2. Inspect the network cables connecting the instruments and network hub.<br>3. Verify that the network hub power is ON.<br>4. Verify the PC network settings.<br>5. Make sure the instrument control software is installed in the correct folder.<br>6. Request service from your dealer. |
| Actual instrument operation is different from the expected. | 1. Check to see if the 'Start' button was pressed more than twice.<br>2. Check to see if the software is executed twice.<br>3. Restart the instrument and software.<br>4. Request service from your dealer. |
| No buttons or pictures are displayed within the software. | 1. Erase and re-install the software. |

# XI. Warranty

This instrument is warranted by Bioneer against manufacturing defects in materials and workmanship for a limited warranty period of one (1) year from the date you received your product. Bioneer will either (1) repair the product at no charge if a hardware defect is found or (2) exchange the product if the same hardware defect arises more than three times during the limited warranty period. Any other accessories other than the instrument itself are considered as consumables and warranted for three months. Spare parts for the instrument will be available for five years from the initial instrument release date. If a defect arises after the limited warranty period, shipping and handling charges may apply to any repairs or exchanges of the product undertaken by Bioneer.

**Exclusions and limitations**

This warranty does not apply: (a) to cosmetic damage, including but not limited to scratches, dents, and broken plastic on ports: (b) to damage caused by accident, abuse, misuse, flood, fire, earthquake or other external causes: (c) to a product or part that has been modified in any way without explicit written consent of Bioneer; or (d) to damage cause by any services performed by unauthorized engineers or service providers.

**Obtaining Warranty Service**

Please review this User Manual and access the online support referred to in the manual accompanying this product before requesting warranty service. If the product is still not functioning properly, contact Bioneer Customer Service at:

Bioneer Corporation (Headquarters)
49-3 Munpyeong-dong, Daedeok-gu, Daejeon 306-220, South Korea
Phone: 82-42-930-8777/ Fax: 82-42-930-8666
Email: sales@bioneer.com
Web site: www.bioneer.com

Bioneer Inc.
1000 Atlantic Avenue, Alameda, CA 94501
Phone: 1-877-264-4300/ Fax: 1-510-865-0350
Email: order.usa@bioneer.com
WebSite: us.bioneer.com

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403 Room, Building 88, number 887, Zuchongzhi Road, Zhangjiang High Technology Park,
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